

REMARKS

The Official Action mailed March 14, 2006, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Also, filed concurrently herewith is a *Request for Continued Examination*. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 1, 2003; February 25, 2004; August 10, 2004; August 30, 2004; and May 2, 2005.

Claims 1, 2 and 4-18 were pending in the present application prior to the above amendment. Claims 9, 10, 14 and 15 have been canceled without prejudice or disclaimer; claims 1, 2, 4, 6-8 and 13 have been amended to better recite the features of the present invention; and new dependent claims 19-25 have been added to recite additional protection to which the Applicant is entitled. Accordingly, claims 1, 2, 4-8, 11-13 and 16-25 are now pending in the present application, of which claims 1, 4, 6, 8 and 13 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action rejects claims 4, 5 and 8-18 under the doctrine of obviousness-type double patenting over claims 1-23 of U.S. Patent No. 6,358,784 to Zhang. The Applicant respectfully submits that the subject application is patentably distinct from the claims of the '784 patent.

As stated in MPEP § 804, under the heading "Obviousness-Type," in order to form an obviousness-type double patenting rejection, a claim in the present application must define an invention that is merely an obvious variation of an invention claimed in the prior art patent, and the claimed subject matter must not be patentably distinct from the subject matter claimed in a commonly owned patent. Also, the patent principally underlying the double patenting rejection is not considered prior art.

The Applicant respectfully traverses the obviousness-type double patenting rejection. Independent claims 4, 8 and 13 recite that a gas containing an impurity is introduced into a semiconductor. The claims of the '784 patent do not teach or suggest that a gas containing an impurity is introduced into a semiconductor. In fact, the claims of the '784 patent are completely silent as to a "gas" or an "impurity." Although the specification of the '784 patent discusses gases and impurities, as stated above, the patent principally underlying the double patenting rejection is not considered prior art.

Therefore, the claims of the present application are not a timewise extension of the invention as claimed in the '784 patent. Reconsideration and withdrawal of the obviousness-type double patenting rejections are requested.

Paragraph 3 of the Official Action rejects claims 1-18 under the doctrine of obviousness-type double patenting over claims 1-24 of U.S. Patent No. 5,424,244 to Zhang. The Applicant respectfully submits that the subject application is patentably distinct from the claims of the '244 patent.

The Applicant respectfully traverses the obviousness-type double patenting rejection. Independent claim 1 recites use of a line-shaped laser beam in an irradiating step; independent claims 4 and 6 recite use of a window having a slit shape in an irradiating step; and independent claims 8 and 13 recite use of a line-shaped target portion in a step of introducing an impurity. These features are all advantageous in that, for example, an impurity can be introduced into a line-shaped region of a semiconductor and an impurity can be added to an entire portion of the semiconductor by changing a relative position of the semiconductor with respect to the line-shaped region in one direction. The claims of the '244 patent do not teach or suggest use of a line-shaped laser beam in an irradiating step; use of a window having a slit shape in an irradiating step; or use of a line-shaped target portion in a step of introducing an impurity. In fact, the claims of the '244 patent are completely silent as to a shape of a laser beam, a "window," a "slit shape" or a "line-shaped target portion." Although the specification of the '244 patent appears to discuss some of the above-referenced features, as stated

above, the patent principally underlying the double patenting rejection is not considered prior art.

In the "Response to Arguments" section, the Official Action asserts, without any support from the prior art or a demonstration of the level of ordinary skill in the art at the time of the present invention, that "claims 8 and 16 [of the '244 patent] describe the laser beam is emitted from an excimer laser, which is also used by the applicant to produce the laser, therefore, the laser emitted described by Zhang ['244] would also produce a linear laser beam" (page 3, Paper No. 030806). The Applicant disagrees and traverses the above-referenced assertions in the Official Action.

It appears that the Examiner is taking the position that use of a line-shaped laser beam in an irradiating step would somehow be inherent based on the disclosure of an excimer laser in claims 8 and 16 of the '244 patent. The Applicant respectfully traverses the finding of inherency, because the Official Action has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the claims of the '244 patent. See Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

The Official Action asserts that "irradiating the laser beam through a window having a slit shape ... is an apparatus limitation" (Id.). The claimed use of a window having a slit shape in an irradiating step is not merely an apparatus limitation. Rather, this feature serves to define the scope of the claimed method. The claimed features are advantageous in that, for example, an impurity can be introduced into a line-shaped region of a semiconductor and an impurity can be added to an entire portion of the semiconductor by changing a relative position of the semiconductor with respect to the line-shaped region in one direction. As such, it is not proper for the Official Action to imply or assert that these features do not "affect the process in a manipulative sense." The Applicant respectfully requests that the Examiner reconsider the scope of the present claims including the use of a window having a slit shape in an irradiating step.

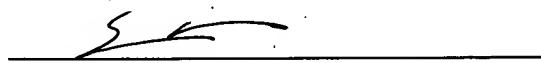
Also, the Official Action asserts that "it would have been obvious ... to use any available apparatus including claimed apparatus, which has a window with slit shape, for the laser irradiating process" (*Id.*). The Official Action has not explained why one of ordinary skill in the art at the time of the present invention would have looked at the claims of the '244 patent, which appear to generally disclose an irradiating step, and would have necessarily concluded that it would have been obvious to use "any available apparatus" to achieve the particular features of the present claims. In other words, the Official Action has not explained why the use of a window having a slit shape would have been obvious based on the irradiating step of the claims of the '244 patent. The Applicant respectfully submits that the above-referenced features are not taught or suggested by the claims of the '244 patent.

It is respectfully submitted that the claims of the present application are not a timewise extension of the invention as claimed in the '244 patent. Reconsideration and withdrawal of the obviousness-type double patenting rejections are requested.

New dependent claims 19-25 have been added to recite additional protection to which the Applicant is entitled. For the reasons stated above and already of record, the Applicant respectfully submits that new claims 19-25 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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